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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,047	11/08/2001	Stephen B. Sutherland	WH 10.340-1 US	2487

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EXAMINER

RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,047

Applicant(s)

SUTHERLAND ET AL.

Examiner

Mike Rahmjoo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1- 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Szeliski et al US Patent 6,320,978, hereinafter, Szeliski.

A per claims 1 and 9 Szeliski teaches defining each object specifying a region of the image which the object affects, a LookAround distance (colored image with pre pixel opacity) defining additional input information required by the object to allow the object to output a scanline see for example column 2 lines 1- 15 and figure 2; and data information of the object which includes defining the data information using vector based techniques or bitmap techniques see for example column 6 lines 19 -21; and determining for each object rendering information which allows assessment of the interaction of the particular object with other objects without rendering thereof, said rendering information comprising said region and said LookAround distance (color and depth information assigned to plural layers) see for example column 2 lines 1- 15 and 34- 35; and defining a hierarchy of said objects (plurality of layers with each layer having its own pre pixel color and pre pixel opacity)which collectively define the image; and rendering scanlines of said image by determining for each scanline (collective assignments in a layered representation of a scene) see for example column 2 lines 38- 39 and lines 59- 62; and a hierarchy of the active objects which affect the particular scanline of the image; and evaluating the hierarchy of active objects and the rendering information thereof to determine the number of scanlines to be outputted by each active object to render the particular scanline of the image see for example column 6 lines 14- 23 through the vector definition of each layer and column 11 lines 40- 55 wherein smoothing is done within a segment corresponding to a particular scanline of the image; and using the results of the evaluation of the hierarchy of objects to cause the lowest active object to output the required number of scanlines and pass the scanlines as input for the next highest active object and repeating the process until the highest ranked active object produces the particular scanline of the image, and repeating the process for the next scanline of

the image until the entire image has been rendered see for example column 2 lines 30- 58 steps (a) through (i) wherein step (d) is an estimation of pre pixel color and pre pixel opacity (defining active objects through each layer) and steps (g- h) are the reassigning and the repeating steps with step (i) as the outputting step.

As per claims 2,3 and 10 Szeliski teaches defining color and an alpha channel factor for transparency characteristics of each interactive object which is included in said rendering information see for example column 2 lines 7- 12 and claim 1 on columns 14- 15.

As per claim 4 Szeliski teaches hierarchy of objects includes a background object which is applied as the last active object using said alpha channel factors of said active objects see for example column 2 lines 3- 5 and column 12 lines 61- 63.

As per claim 5 Szeliski teaches providing to said lower most active object an input corresponding to a transparent object see for example column 12 lines 55- 62 through the opacity which is assigned to the foreground.

As per claims 6 and 7 Szeliski teaches at least some of said objects are render layers where each render layer is defined by a separate hierarchy of interacting objects defined in the same manner and each render layer has render layer information corresponding to object rendering information such that said render layers are treated as normal objects relative to higher and lower objects and evaluation of a hierarchy of objects is based on said object rendering information and said render layer information see for example column 12 lines 39- 67 through manipulation and refinement of each of layer sprites images(hierarchy of objects).

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As per claim 8 Szeliski teaches said hierarchy of active objects and render layers is used during rendering to form a hierarchy series of alpha, channel factors used to determine the transparency associated with each pixel of each scanline see for example column 2 lines 7- 12.

As per claim 11 Szeliski teaches defining the lowest object as a transparent background object and defining a desired background as the upper most object see for example column 2 through steps (g) and (h).

As per claims 12- 19, these claims are similar in scope to claims 1- 11 and are rejected under the same rational.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; US Patents 6,300,955, 5,999,191, 6,320,580, and 6,301,496.

Inquiry


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is (703) 305- 5658. The examiner can normally be reached on 6:30- 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (703) 308- 6829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872- 9314 for regular communications and (703) 872- 9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305- 4750.

Mike Rahmjoo

August 18, 2003



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
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